AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS

1.-14. (Canceled)

15. (New) A sorption element (1) for a sorption-supported air conditioning unit for heating and/or cooling and/or dehumidification of a room or an airflow, with the sorption element (1) being arranged as a tubular piece with a tubular cross section (16) with a first (11) and an opposing second (12) open end whose first open end (11) is delimited with a first air-permeable grid element (13) and whose second open end (12) is delimited with a second air-permeable grid element (14), with the grid elements (13, 14) being impermeable for a sorption agent (3), characterized in that the sorption agent (3) is arranged as a loose fill, with the sorption agent (3) being filled up to a height (31) which is lower than the length (15) of the sorption element (1), that the sorption agent (3) can be fluidized/swirled by an airflow, especially coming from below.

16. (New) A sorption element (1) according to claim 15, characterized in that the sorption element (1) has a substantially circular cross section.

17. (New) A sorption element (1) according to claim 15, characterized in that the sorption element (1) has a substantially polygonal, especially rectangular, cross section.

18. (New) A sorption element (1) according to one of the claims 15 to 17, characterized in that the first open end (11) and/or the second open end (12) is smaller than the tubular cross section (16).

19. (New) A sorption element (1) according to one of the claims 15 to 18, characterized in that a maintenance opening (17) is provided through which the sorption agent (3) can be introduced into the sorption element (1) and/or can be exchanged.

20. (New) A sorption element (1) according to one of the claims 15 to 19, characterized in that the sorption agent (3) comprises silica gel, a hygroscopic salt, especially LiCl or LiBr, a molecular sieve or a hygroscopic metal oxides, especially Al_2O_3, or a combination of the aforementioned.

21. (New) A sorption element (1) according to one of the claims 15 to 20, characterized in that the sorption element is arranged in a substantially perpendicular fashion.

22. (New) A sorption system (2) for a sorption-supported air conditioning unit for dehumidifying and/or heating and/or cooling a room or an airflow, characterized in that it comprises at least two substantially parallel extending sorption elements (1) according to one of the claims 15 to 21.

23. (New) A sorption system (2) according to claim 22, characterized in that it is rotatable about an axis substantially parallel to the longitudinal axis of the sorption system (2) and/or is movable normal to its longitudinal direction.

24. (New) A method for a sorption-supported air conditioning unit for dehumidifying and/or heating and/or cooling a room or an airflow with a sorption element (1) according to one of the claims 15 to 22, optionally with a sorption system (2) according to claim 8 or 9, characterized in that in a conditioning cycle the airflow to be conditioned is guided through at least one of the sorption elements (1) , with the airflow to be conditioned being dehumidified.

25. (New) A method according to claim 24, characterized in that after reaching a predetermined degree of saturation of the sorption agent (3) in a regeneration cycle, a regeneration airflow, especially heated air, is guided through the at least one sorption element (1), and the conditioning cycle is started again after regeneration.

26. (New) A method according to claim 25, characterized in that two or more sorption elements (1) perform conditioning and regeneration cycles in a time-staggered manner with respect to each other.